

DEPARTMENT OF JUSTICE

Analysis of Leasing vs. Buying the State Crime Lab

The Legislative Finance Committee requested that the Department of Justice (DOJ) conduct a comparative analysis of continuing to lease versus purchasing the Forensics Science Building in Missoula.

Analysis

In performing this analysis, the department used a present value, life-cycle costs analysis methodology. This process looks at the costs of alternatives over a specified period of time. Future costs are expressed in current or "present" dollars.

The value of money changes over time, often referred to as the "time value of money" or the "purchasing power of money." Because of inflation, a dollar today has more value than a dollar in the future. In order to convert future dollars to present dollars, future dollars must be discounted to reflect today's values.

There are two variables in the mathematical equations used in the discount factor to determine the present value of a dollar:

- the interest rate, and
- the time period.

As either of these two variables increases, the present value of a dollar decreases. The greater the interest rate and the longer the time period, the less a future sum of money is worth today.

The analysis was conducted using a 30-year period. Based on information provided by the Board of Investments, the payback on borrowed money using State of Montana general obligation bonds was determined to be 30 years at 5.5 percent.

Assumptions

Assumptions are determined prior to analyzing costs associated with leasing and building. These variables are usually expressed as dollars per square foot. Total costs are calculated based on total square footage. Other assumptions include inflation rates and the discount factors to determine present value of the future outlays of money.

The assumptions used in this analysis are listed in Table 3. The period of 30 years was used for two reasons:

- the bond period is 30 years, and
- the building is already six years old and the normal analysis of buildings is usually 40 years (*Legislative Audit report "Lease vs Build Analysis" February, 1997*).

The longer the projection, the more favorable it is to purchase once the loan payments ends. However, as the building ages, maintenance is likely to increase and the likelihood of major renovation costs increases.

Projected Lease Cost

In preparing this analysis, the assumption is that when the present lease expires in 2015, the new negotiated rate will double, followed by a 15 percent increase every five years thereafter. Taxes shown are those increases the department pays over and above the property tax levels when the original lease was negotiated. The department has agreed to assume all tax increases as additional payments to the lessor.

Projected Purchase Costs

In analyzing the cost of purchasing, the department assumed a 5.5 percent interest rate for State of Montana general obligation bonds with a 30-year payback period. The department would assume all maintenance and utilities, which are inflated at 4 percent per year. Property taxes are removed as state property is excluded from property taxes.

Table 1 summarizes the analysis of buying versus leasing the crime lab. It does not take the value of the building at the end of the 30-year period into consideration.

Table 1	
Present Value Analysis - Lease vs. Purchase	
Purchase Cost	\$ 13,443,520
Lease Cost (30 years)	<u>14,820,354</u>
Savings from purchasing	\$ 1,376,834

Retained Value

Table 1 considers only the actual cash flow for both the lease and purchase options. It does not consider the value of the building at the end of the 30-year evaluation period. Under the purchase option, the state would own a valuable building at the end of that time period. If the Department of Justice were to then sell the building, the receipts from the sale would provide additional revenue, reducing the cost of the purchase option.

If we assume a purchase cost of \$7,750,000, then over 30 years at an annual increase rate of 3.5 percent, the Forensics Science Building would have a projected value of \$21,752,651.

If this building were sold in 30 years, the sale value would have to be discounted to present dollars in order to consider this value in the analysis. Using the same discount factor we used for the lease and purchasing costs (5.5 percent), the present value of this building would be \$4,365,439. This would reduce the cost of the purchase option from \$13,443,520 to \$9,078,081.

Table 2
Present Value Analysis, with Value of Building Included

Purchase Cost	\$13,443,520
Less: Present value of building	<u>(4,365,439)</u>
Net Cost of Purchase	\$ 9,078,081
Lease Cost (30 years)	<u>\$14,820,354</u>
Savings from purchasing	\$ 5,742,273

Other Issues

In addition to the above calculations, non-quantifiable issues need to be considered as well. The local tax base would be reduced if the state were to purchase the building as the state does not pay property taxes.

There are risks involved with owning a building, including future costs for renovation and/or loss of flexibility. The Forensics Science Building is architecturally more complex than the average office building, requiring special mechanical consideration for movement of air, as well as unique plumbing requirements.

On the other hand, leasing comes with obvious risks. With such a specialized building, the owner has definite negotiation advantages when setting future lease costs – because of its very specialized requirements, the Forensic Science Building cannot easily relocate to another building.

Summary

This analysis indicates that the state would save money by purchasing the building. However, it would require that the state initially spend \$7,750,000 so that, over the next 30 years, it would realize a net benefit of \$5,742,273.